

EXHIBIT D

ALLERGEN NOMENCLATURE

IUIS Allergen Nomenclature Sub-Committee

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[Plantae](#) [Liliopsida](#) [Poales](#) [Phleum pratense](#) [Phl p 4](#)

Allergen Details:

Allergen name:	Phl p 4
Lineage:	Source: Plantae Liliopsida Order: Poales Species: Phleum pratense (Timothy)
MW(SDS-PAGE):	55
Allergenicity:	- 82% of patients tested showed IgE binding to 60 kd Phl p 4 proteins on immunoblot of ragweed pollen extract. IgE binding to nitrocellulose-blotted ragweed pollen extract was inhibited with purified Phl p 4 (2 patients tested) - 75% of grass pollen-allergic patients show IgE binding to Phl p 4 on immunoblot of timothy grass pollen extract. See also medline 96316935
Allergenicity ref.:	1597349
Food allergen:	No
Entry updated on:	13-02-2003

+-	Isoallergen and variants	GenBank Nucleotide	UniProt	PDB
▼	Phl p 4.0101	AJ512487	Q5ZQK5	

Amino acid sequence:	SSCEVALSYY PTPLAKEDFL RCLVKEIPPR LLYAKSSPAY PSVLGQTIRN SRWSSPDNVK PIYIVTPTNA SHIQSAVCVG RRHGVIRVR SGGHDYEGLS YRSILOPEEEFA VVDSLKMRRAV WVDGKARTAW VDSGAQLGEL YYAIHKASPV LAFPAGVCPT IGVGGNFAGG GFGMLLRKYG IAAENVIDVK LVDANGTLHD KKSMDGDDHFW AVRGGGGESF GIVVAAVKVRL LPVPPTVTFV KIPKKASEGA VDIINRWQVV APQLPDDLMV RVIAQGPTAT FEAMYILGTQ TLTPLMSSKF PELGMNASHC NEMSWIQSIP FVHLGHRDN1 EDDLLNRNNT FKPFQAEYKSD YYVEPPFKEV WEQIFSTWLL KPGAGIMIFD PYGATISATP EWATPFPHRK GVLFNIQYVN YWFAPGAGAA PLWSKEDIYH YMPEPYVSKNP RQAYANYRDI DLGRNEVVND VSTFSSGLVW GQKYFKGNFQ RLAITKGKVD PTDYFRNEQS IPLLKQY
Sequence reference:	16198308
Allergenicity:	95% of grass pollen-allergic patients (98 tested) showed IgE binding to Phl p 1 in immunoblot of pollen extract; 97/98 subjects showed IgE binding to rPhl p 1 on nitrocellulose filters.
Allergenicity ref.:	1597349
Food allergen:	No
Original Date:	'Dec 15 2005 1:57PM
Date Created:	2010-04-29 16:11:59
Last Updated:	2010-01-27 21:15:36

▼	Phl p 4.0201	AJ512488	Q5ZQK4	
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Amino acid sequence:	SSCQVAFSYF PPPAAKEDFL GCLVKEIPPR LLYAKSSPAY PSVLGQTIRN SRWSSPDNVK PLYIITPTNV SHIQSAVCVG RRHGVIRVR SGGHDYEGLS YRSILOPEEEFA VVDSLKMRRAV WVDGKARTAW VDSGAQLGEL YYAIHKASPV LAFPAGVCPT IGVGGNFAGG GFGMLLRKYG IAAENVIDVK LVDANGKLHD KKSMDGDDHFW AVRGGGGESF GIVVAAVKVRL LPVPPTVTFV KISKTVSEGA VDIINKWQVV APOLPADLMV RIAQGPKAT FEAMYLGTCK TLTPLMSSKF PELGMNASHC NEMSWIQSIP FVHLGHRDAL EDDLLNRNNS FKPFQAEYKSD YYVEPPFKEV WEQIFSTWLL KPGAGIMIFD PYGATISATP ESATPFPHRK GVLFNIQYVN YWFAPGAAAAA PLWSKEDIYH YMPEPYVSKNP RQAYANYRDI DLGRNEVVND VSTYASCKVW GQKYFKGNFE RLAITKGKVD PTDYFRNEQS IPLLKQY
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PubMed

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Display Settings: Abstract

Int Arch Allergy Immunol. 1992;97(4):287-94.

Diagnosis of grass pollen allergy with recombinant timothy grass (*Phleum pratense*) pollen allergens.

Valenta R, Vrtala S, Ebner C, Kraft D, Scheiner O.

Institute of General and Experimental Pathology, AKH, University of Vienna, Austria.

Abstract

In order to establish a test system for grass pollen allergy based on the use of recombinant allergens we chose timothy grass (*Phleum pratense*), a widely spread grass, as a model. From a lambda gt11 cDNA expression library that we had constructed from pollen RNA of timothy grass (*P. pratense*), we had obtained with serum IgE from a grass pollen-allergic individual 60 IgE-binding clones. By differential testing with sera from different grass pollen-allergic patients, we selected three distinct clones encoding *Phl p I* (group I), *Phl p V* (group V) and profilin from timothy grass, which when used together allowed the diagnosis of grass pollen allergy in 97 out of 98 tested grass pollen-allergic patients employing a simple plaque lift technique. This recombinant test based on plaque lifts containing allergen-beta-galactosidase fusion proteins was compared with IgE immunoblots using crude pollen protein extracts from timothy grass. Both methods were in good agreement with RAST scores and clinical data, and proved to be useful for the diagnosis of grass pollen allergy. Our results further indicate that a limited panel of only two recombinant grass pollen allergens, *Phl p I* and *Phl p V*, together with the plant panallergen profilin could be sufficient for the diagnosis and possibly immunotherapy of grass pollen allergy.

PMID: 1597349 [PubMed - indexed for MEDLINE]

Publication Types, MeSH Terms, Substances

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